STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

ORDER WQ 2009-0007

In the Matter of Petitions for Reconsideration of Water Quality Certification for the

RE-OPERATION OF PYRAMID DAM FOR
THE CALIFORNIA AQUEDUCT HYDROELECTRIC PROJECT
FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2426

SOURCE: Piru Creek

COUNTY: Los Angeles and Ventura Counties

ORDER PARTIALLY GRANTING PETITION FOR RECONSIDERATION AND AUTHORIZING ISSUANCE OF REVISED WATER QUALITY CERTIFICATION

BY THE BOARD:

1.0 INTRODUCTION

California Trout, Inc. and Friends of the River (collectively, Petitioner) petition the State Water Resources Control Board (State Water Board) for reconsideration of the State Water Board Executive Director's certification of a proposed amendment to the Federal Energy Regulatory Commission (FERC) license for FERC hydroelectric Project 2426 (Project) as complying with the requirements of section 401 of the Clean Water Act (33 U.S.C. § 1341). The State Water Board finds that portions of the petition for reconsideration have merit, and thus modifies the certification as described below, and approves the certification as modified. (Cal. Code Regs., tit. 23, § 3869.)

2.0 FACTUAL BACKGROUND

The California Department of Water Resources (DWR) and the City of Los Angeles (collectively Applicant or Licensee) applied to FERC for an amendment to the current license for FERC Project No. 2426 on March 17, 2005. FERC Project No. 2426 includes a number of hydroelectric developments that are situated along the length of the California Aqueduct. The application for the license amendment only addresses operation of Pyramid Dam and associated impacts to the 18-mile reach of Piru Creek between Pyramid Dam and Lake Piru. Lake Piru is a non-Project facility operated by United Water Conservation District.

Amendments to the FERC license requested in Applicant's application included the modification of minimum flow requirements for Piru Creek below Pyramid Dam that were required under Article 52 and Exhibit S of the existing FERC license, directing Applicant to establish and maintain a year-round trout fishery. After the United States Fish and Wildlife Service (FWS) informed Applicant that the flow regime was adversely affecting the arroyo toad (*Bufo californicus*), a species listed as endangered under the federal Endangered Species Act, Applicant requested the license amendment to avoid incidental take of the arroyo toad. The requested license amendment incorporates an operating schedule Applicant developed in consultation with FWS, the California Department of Fish and Game (DFG), the U.S. Department of Agriculture, the United States Forest Service (Forest Service), and other interested agencies and parties.

On February 10, 2005, prior to submittal of the application for a license amendment, Licensee submitted a request to FERC for a temporary waiver from the minimum flow releases under FERC license Article 52. FERC approved the temporary waiver on April 12, 2005, and DWR has since that date been operating Pyramid Dam flow releases to simulate natural flow conditions using the same operating guidelines that would be implemented under the license amendment.

The DWR water right at Pyramid Dam is authorized under Water Right Permit 18709 (Application 25988) issued by the State Water Board. Permit 18709 is for year-round storage of 55,000 acre-feet of water collected from Piru Creek. Pyramid Dam is also designated as a point of rediversion under various permits and licenses held by DWR that authorize water to be

conveyed through the California Aqueduct for distribution at various facilities. Fish and wildlife enhancement is an authorized purpose of use under Water Right Permit 18709, but the permit does not include any requirements for minimum flows in Piru Creek.[1]

Before FERC may issue a new license, Applicant must obtain water quality certification under section 401 of the Clean Water Act from the State Water Board. (33 U.S.C. § 1341.) The State Water Board must certify that the Project will comply with the applicable provisions of the Clean Water Act, including water quality standards set forth in the Water Quality Control Plan for the Los Angeles Regional Water Quality Control Board (Basin Plan). (*Ibid.*) The State Water Board must analyze the overall effect of the Project license amendment on water quality and include conditions in the certification, if necessary, to adequately protect the designated beneficial uses identified in the Basin Plan.[2]

The State Water Board Executive Director certified the license amendment on December 9, 2008. On January 7, 2009, the State Water Board received a petition for reconsideration and request for stay from Petitioner, pursuant to California Code of Regulations, title 23, section 3867. Petitioner requests that the State Water Board revoke the certification, prepare a subsequent or supplemental Environmental Impact Report (EIR), and adopt the conditions recommended in the petition. Petitioner also requests a stay on the certification pending a decision on reconsideration, pursuant to California Code of Regulations, title 23, section 3869, subdivision (d). A notice regarding the petition was issued by the State Water Board on January 30, 2009, that included a request for comments or responses to the petition to be received within 20 days. Comment letters were received before the end of the 20-day period from the following parties:

[1] In Water Right Decision 1586 (1982) the State Water Board approved applications for the appropriation of water from the Santa Clara River and its tributaries, including Application 25988. Permit 18709 included conditions requiring DWR to fund and make water available for a steelhead study to be conducted by the Department of Fish and Game, and reserved jurisdiction to adopt new permit conditions upon the completion of the study. The study identified the need for fish passage facilities and minimum flows below another project approved in Decision 1586, the United Water Conservation District's Vern Freeman Diversion Dam, but concluded that ample flow is available in the system for upstream and downstream migration without the need to release water from the other projects approved in Decision 1586. Based on the results of the study, the State Water Board amended the permit for the Vern Freeman Diversion Dam to require bypass flows and a fish ladder, and deleted the study requirements and reservation of jurisdiction from Permit 18709. (State Water Board Order WR 87-8.)

[2] The existing beneficial uses identified for Piru Creek in the Basin Plan include: agricultural supply (AGR); industrial process supply (PROC); groundwater recharge (GWR); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); wildlife habitat (WILD); rare, threatened, or endangered species (RARE); and spawning, reproduction, and/or early development for fish (SPWN).

- United States Fish and Wildlife Service
- California Department of Water Resources
- Dr. Samuel Sweet
- State Water Contractors, Inc.

Three late comment letters were received after the end of the 20-day period from the following parties:

- United Water Conservation District
- Land Protection Partners on behalf of Friends of the River and California Trout, Inc. (2 letters)

Because the State Water Board is providing an opportunity for comment on a draft order before it adopts a final order, and the comments would be timely for that purpose, the State Water Board has considered the three late comment letters.

3.0 APPLICABLE LAW

An interested person may petition the State Water Board for reconsideration of an action or failure to act. (Cal. Code Regs., tit. 23, § 3867.) Following a petition for reconsideration, the State Water Board may

(1) refuse to reconsider the action or failure to act if the petition fails to raise substantial issues that are appropriate for reconsideration;
(2) deny the petition upon a finding that the original action or failure to act was appropriate and proper;
(3) set aside or modify, if possible, the previous action or take new appropriate action; or
(4) direct the executive director to take appropriate action.

(Cal. Code Regs., tit. 23, § 3869, subd. (a).)

4.0 ARGUMENTS AND DISCUSSION

4.1 The 401 Certification did not Violate the Clean Water Act or other State and Federal Water Quality Requirements

Petitioner contends that the certification fails to include conditions necessary to protect the beneficial uses of Piru Creek, to meet the water quality objectives in the Basin Plan, and to satisfy antidegradation requirements. For the reasons set forth in sections 4.1.1 through 4.1.3, the State Water Board concludes these contentions are without merit.

4.1.1 The 401 Certification protects the beneficial uses of Piru Creek

The State Water Board may deny or condition certification as necessary to comply with applicable water quality standards. (Wat. Code, § 13160; Cal Code Regs., tit. 23, §§ 3837, subd. (b)(1) & 3859, subd. (a). See generally *PUD No. 1 v. Washington Department of Ecology* (1994) 511 U.S. 700, 704-705 [water quality standards include designated uses, criteria, and antidegradation requirements]; see also Wat. Code, § 13050, subds. (f) & (h) [the Porter-Cologne Water Quality Control Act uses the terms beneficial use and objectives instead of designated use and criteria].) Petitioner claims that a report by Land Protection Partners (LPP) that accompanied the petition shows that the certification conditions are insufficient to protect the beneficial uses for Piru Creek for a number of reasons. The report recommends an alternative flow schedule that includes the following requirements:

- From the first winter storm to March 15, a volume of water equivalent to that which flows into Pyramid Lake shall be released from it, within the operational constraints of Pyramid Dam.
- At a period of at least once every five to seven years, a release event of significant volume adequate to produce scouring flows must be implemented if such flows do not occur naturally from rainfall events.
- Any water deliveries shall take place during the winter period (November to February) and be released to emulate the flows of a winter storm in volume and timing.
- From March 15 through August 31, water shall be released at a minimum of 15 cubic feet per second (cfs) or natural inflows to Pyramid Lake, whichever is greater, then decreased by 1 cfs every 2 days between September 1 and September 20 to achieve and maintain a 5 cfs minimum flow from September 20 until the first winter storm.

- Flows shall be increased gradually to meet the 15 cfs flows in March during years when flows are less than 15 cfs leading up to March 15.

The State Water Board finds that the report fails to provide substantial support for the assertion that the certification conditions are insufficient to protect the beneficial uses for Piru Creek.

First, the report alleges that the elimination of minimum summer instream flows may actually hurt the arroyo toad by eliminating shallow pool conditions necessary for successful breeding, forcing the toads to share the remaining deeper pools with predatory bullfrogs.
Dr. Samuel S. Sweet, a professor in the Department of Ecology, Evolution and Marine Biology at the University of California, Santa Barbara, has conducted the majority of life history studies of arroyo toads, which occurred primarily in the Los Padres National Forest. Dr. Sweet has authored several reports on the ecology and status of arroyo toads for the Forest Service and describes the major characteristics of arroyo toad breeding pools in a 1992 report[3] as, "proximity to sandy terrace habitat; minimal current; majority of pool < 1 inch deep; substrate of sand, gravel, or pebbles; gently sloping shoreline, or central bar; and bordering vegetation low or set back such that most of the pool is open to the sky." Based on this description of breeding habitat, under a scenario of gradually diminishing summer flows (i.e., without the 15 cfs minimum called for by Petitioner), arroyo toads would not be expected to inhabit the deeper pools where bullfrogs are more likely to occur. Furthermore, it is unlikely that absence of the enhanced summer flow advocated by the Petitioner would result in elimination of breeding pools during the breeding season. According to the FWS Recovery Plan for the arroyo toad,[4] arroyo toads may begin breeding as early as January in Southern California (late March in the northern portion of their range), with peak metamorphosis from larval to juvenile life stages occurring from late April to mid-May (late June to mid-July in the north). While breeding activity may continue as late as July, depending upon the condition of the female, a lack of augmented summer flows would not eliminate the low flow, shallow pools favored by the arroyo toad as breeding habitat.

FWS also addresses the impact minimum summer stream flows of 15 cfs would likely have on arroyo toad habitat in Piru Creek in its comment letter as follows:

[3] Sweet, S. S. (1992) Initial report on the ecology and status of the arroyo toad (*Bufo microscaphus californicus*) on the Los Padres National Forest of southern California, with management recommendations and technical Appendix. U. S. Department of Agriculture, Forest Service, Los Padres National Forest.

[4] USFWS (1999) Arroyo southwestern toad (*Bufo microscaphus californicus*) recovery plan. Portland, Oregon.

> Maintaining summer flows at 15 cfs would channelize segments of Piru Creek that would otherwise be shallow pools and open sand and gravel flood terraces. The steady release of water would create entrenched channels with encroaching vegetation and would give opportunities for non-native predators (e.g., largemouth bass (*Micropterus salmoides*), green sunfish (*Lepomis cyanellus*), crayfish (*Procambarus clarkii*), and bullfrogs (*Rana catesbeiana*)) to proliferate by expanding habitat for these species within Piru Creek.

These comments offer a convincing argument against the 15 cfs summer flows. The State Water Board finds that elimination of minimum summer instream flows would not harm the arroyo toad, and that adopting the alternative flow schedule recommended by Petitioner would harm the arroyo toad.

The petition further alleges that California red-legged frog (CRLF) larvae may require breeding pools as late as June or July. While it is true that some CRLF may require breeding pools in June or July (the species historically has been found over a substantial portion of the state at elevations that range from sea level to about 5,000 feet), information contained in the FWS CRLF Recovery Plan[5] states that most adult frogs lay their eggs in March and that eggs develop into tadpoles 20 to 22 days later. CRLF tadpoles typically metamorphose into juveniles 11 to 20 weeks after becoming tadpoles and inhabit shallow water (10 to 20 inches) prior to metamorphosis. The gradual reduction of instream flow during the summer that is expected to occur under the current certification conditions would not eliminate this shallow water habitat. Moreover, according to Cook,[6] the timing of metamorphosis in red-legged frogs "is an important adaptation to California's Mediterranean climate, where ephemeral water bodies hydrate in the winter and are dry by late summer or fall." Consequently, restoration of a more natural flow regime in Piru Creek is not expected to harm any CRLF that may be present.

The petition contends that under the alternative flow regime described above:

[5] USFWS (2002) Recovery plan for the California red-legged frog (*Rana aurora draytonii*). Portland, Oregon.

[6] Cook, D. (1997) Biology of the California red-legged frog: a synopsis. Transactions of the Western Section of the Wildlife Society 33:79-82.

a) the flow regime would be sufficient to sustain native trout populations and coldwater fish habitat;
b) scouring (from winter flows) would preserve essential arroyo toad breeding habitat by eliminating vegetation and exotic plant species on the banks of the creek;
c) summer instream flows would help buffer arroyo toad and CRLF from adverse impacts of bullfrogs by creating a sufficient variety and number of pools and habitat so reproduction of the native species is maximized and the species are able to segregate into their preferred habitats;
d) an adaptive management program would ensure that adverse impacts of the license amendment would be mitigated; and
e) removal of adult bullfrogs from arroyo toad breeding habitat would be a more effective method of dealing with this invasive predator than reducing summer instream flows.

The winter flows called for in Petitioner's proposal are largely the same as those contained in the water quality certification, and the modifications Petitioner would make to the winter flow regime[7] are not necessary to protect beneficial uses. The alternative flow regime's provision for augmented summer flow releases and the adaptive management program proposed by the Petitioner would not be appropriate for several reasons. As stated previously, maintaining summer instream flows would channelize segments of Piru Creek, would promote the encroachment of vegetation, and would not necessarily segregate native species, but may in fact provide opportunities for non-native predators to proliferate. The adaptive management program, which includes selectively removing adult bullfrogs from arroyo toad breeding habitat during the breeding season, implies the need for intensive, long-term management actions that, as FWS notes in its comment letter on the petition, would not be consistent with the goals of the Endangered Species Act. Moreover, no evidence or supporting information is provided in the Petitioner's report to support the claim that maintaining summer instream flows would create a sufficient variety and number of pools to maximize arroyo toad reproduction while also segregating native and non-native species.

[7] The alternative flow regime in the petition includes a provision for additional winter flow releases "of significant volume adequate to produce scouring flows" that would be implemented at a period of at least once every five to seven years, if such flows do not occur naturally from rain events.

Additionally, there is insufficient evidence or data to support Petitioner's claim that the alternative flow regime is well suited to support native trout populations. The LPP report states that summer flows are beneficial to native fish based on a study that focuses on Putah Creek, which is located in a very different environmental setting in northern California. On Putah Creek, releases during the summer of stored water that would otherwise be exported from the watershed serve to compensate, in part, for major reductions in pre-project winter flows. (Cf. State Water Board Decision 869 (1957) at pp. 11-14 [discussing effects of the Solano Project on streamflows and groundwater recharge].) In contrast, the FERC license amendment seeks to restore the natural flow regime to which the fish are adapted. In fact, comments filed by the National Marine Fisheries Service (NOAA Fisheries) on the Draft EIR state that the Project would have overall beneficial effects on populations of native rainbow trout by restoring natural migration flow opportunities, reducing non-native aquatic predators, and restoring natural fluvial geomorphic processes.

The State Board also agrees with comments made by FWS and Dr. Sweet that the provision for sediment replenishment below Pyramid Dam included in the Petitioner's proposal is unnecessary and not supported scientifically. Most of the arroyo toad habitat is located in the lower half of the Project reach below the confluence with tributaries that provide a source of sediment. FWS field observations have provided additional documentation showing that sufficient sediment input occurs locally (i.e., from the middle Piru Creek tributaries). Additionally, DWR's EIR states that channel degradation is an ongoing process under the current condition, and although importation of sediment by truck was investigated, it was determined to be impractical.

4.1.2 The certification provides reasonable assurance that the project will comply with numerical water quality objectives

Petitioner next argues that the certification requires reconsideration because the State Water Board "failed to ensure that the Project would not violate numerical water quality standards for temperature and dissolved oxygen" and claims that, "the State Board did not include any conditions in the 401 certification that address the violation of water quality standards that will result from this Project." (Petition, p. 10.)

The Petition does not explain how the proposed changes would affect dissolved oxygen or temperature levels, but rather cites to previous letters submitted by Petitioner to the State Water

Board. (Nov. 2, 2007 letter p. 9-10; Dec. 4, 2008 letter p. 2.) These letters in turn cite to the DWR EIR and the FERC Environmental Assessment (EA).

4.1.2.1 Temperature

The Basin Plan objectives for temperature are as follows

- Discharges of wastewater can cause unnatural and/or rapid changes in the temperature of receiving waters that can adversely affect aquatic life.

- The ***natural receiving water temperature*** of all regional waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses. Alterations that are allowed must meet the requirements below.

- For waters designated WARM, water temperature shall not be altered by more than 5°F ***above the natural temperature*****.** At no time shall these WARM-designated waters be raised above 80°F ***as a result of waste discharges***.

- For waters designated COLD, water temperature shall not be altered by more than 5°F ***above the natural temperature.***

(Basin Plan, p. 3-16 (emphasis added).)

The portions of the EIR and EA to which Petitioner cites acknowledge that temperature will likely increase, particularly between June and September, as a result of the Project. (FERC EA p. 54.) The EA also acknowledges that even with flows as high as 27 cfs, instantaneous water temperature occasionally exceeded 80°F. (FERC EA p. 16-17.) Petitioner fails to note, however, that those same sections of the EA point out that under the Project, "water temperatures are likely to be equal to or slightly lower than those that would be experienced under natural conditions without the project. Thermal stratification, which is common in reservoirs such as Pyramid Lake, would cause the discharge water to be cooler than the natural inflow to Pyramid Lake during the warmest parts of the year." (FERC EA, p. 54.) As further recognized in the EA, water temperatures are not expected to exceed those that occurred under natural conditions, thus the Basin Plan objectives are unlikely to be exceeded. (FERC EA, p. 54.) By their language, the objectives (as cited above) only apply to alteration of natural receiving water temperature.

Furthermore, temperatures above 80°F only violate the Basin Plan objectives where they are "a result of waste discharges." Temperatures in excess of 80°F may be a result of waste

discharges in a scenario, unlike here, where warmer water is being discharged into a colder body of water. Where the discharge is the entire natural flow of the creek, and the temperature of the discharge is no higher than what would occur under natural conditions, high temperatures are not "a result" of the discharge. Any increase in summer temperatures as compared to the flow regime under FERC license Article 52 is not caused by the discharge, but by the fact that the discharge is no longer augmenting flows to a rate more than would occur naturally. The objective, which applies generally to all discharges in the region, including municipal and industrial discharges, cannot reasonably be construed to require dischargers to increase the volume of their discharges to prevent naturally occurring low flow conditions from resulting in temperatures in excess of 80°F.

For these reasons, the Project, by its nature, complies with water quality standards for temperature.

4.1.2.2 Dissolved oxygen

The Basin Plan objectives for dissolved oxygen are as follows

- At a minimum, the mean annual dissolved oxygen concentration of all waters shall be greater than 7 mg/L, and no single determination shall be less than 5.0 mg/L, **except when natural conditions cause lesser concentrations**.

- The dissolved oxygen content of all surface waters designated as WARM shall not be depressed below 5 mg/L **as a result of waste discharges**.

- The dissolved oxygen content of all surface waters designated as COLD shall not be depressed below 6 mg/L **as a result of waste discharges**.

- The dissolved oxygen content of all surface waters designated as both COLD and SPWN shall not be depressed below 7 mg/L **as a result of waste discharges**.

(Basin Plan, p. 3-11 (emphasis added).)

As with temperature, as discussed above, any reduction in dissolved oxygen concentration as a result of this Project will occur because "natural conditions cause lesser concentrations," and not "as a result" of waste discharges. (DWR EIR, p. 3-72.) Again, the Project complies with dissolved oxygen objectives.

4.1.3 The certification does not violate state and federal antidegradation policies

Warm (WARM) and cold (COLD) freshwater habitats are both beneficial uses of the creek, as are wildlife habitat (WILD) and rare, threatened, or endangered species (RARE). (LARQCB, Los Angeles Basin Plan 2-2 (1994).)

The federal antidegradation policy requires, in pertinent part, that:

> (1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
>
> (2) Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected, unless the State finds that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully.
>
> (40 C.F.R. § 131.12(a).)

State policy for water quality control requires that where water quality is better than required by the applicable Basin Plan objectives, that water quality will be maintained unless it has been demonstrated that a change: 1) is consistent with the maximum benefit to the people of the State, 2) does not unreasonably affect present and anticipated beneficial uses of the waters, and 3) does not result in water quality less than that prescribed in the Basin Plan. (State Water Board Resolution 68-16; see also State Water Board Order WQ 86-17 [State Water Board Resolution 68-16 incorporates the federal antidegradation policy as applied to situations where the federal antidegradation policy is applicable].)

The federal antidegradation policy and State Water Board Resolution 68-16 apply to reductions in water quality. (See State Water Board Decision 1631 (1994) at p. 151.) This includes consideration of changes that have already occurred, if they occurred after the state and federal policies took effect, but have not been reviewed for consistency with those policies. (See *id.* at pp. 151-152 ["The federal antidegradation policy applies to reductions in water quality which occurred or threatened to occur after the policy was adopted."]) Where the approval under consideration involves both beneficial and adverse changes in water quality, the State or Regional Water Board considering the approval reviews whether the adverse changes are consistent with antidegradation policies. Accordingly, this section evaluates whether reducing

summer instream flows to naturally occurring flows is consistent with the federal antidegradation policy and State Water Board Resolution 68-16.[8]

The proposed change in flows serves important social and environmental development. Water development and water conservation projects may be considered to be important social and economic developments that justify a lowering of water quality. (See Wat. Code, § 13000.) Similarly, environmental protection may constitute important social development, justifying a change in water quality, even if no other social or economic benefits to the community are demonstrated. (See Letter from William R. Attwater to Regional Water Board Executive Officers, *Federal Antidegradation Policy* (Sept. 7, 1987) http://www.waterboards.ca.gov/water_issues/programs/tmdl/records/state_board/2003/ref1948.pdf.) It would be inconsistent with the policies of the Clean Water Act and the Porter-Cologne Water Quality Control Act if economic concerns could warrant reductions in water quality, but conflicting water quality concerns could not. Thus, for example, if a discharge point is moved to less sensitive waters, the improvement in water quality at the original discharge point may justify the reduction in water quality at the new discharge point. (*Ibid.*)

Similarly, where there are two conflicting uses, the quality of water for one use may be reduced where the change improves water quality for the other, in appropriate circumstances. Improvement to one beneficial use offset by detriment to another less sensitive use is valid in much the same way that movement of a discharge to less sensitive waters is permissible. (See 40 C.F.R. § 131.11(a)(1).) Absent the ability to balance conflicting uses in this way, it would be difficult to synthesize the requirements for Clean Water Act water quality standards. (See 40 C.F.R. §§ 131.11, 131.12.) Furthermore, if the law did not permit changes in water quality to protect endangered species where those changes would adversely affect other species, the State Water Board's only available course of action would be to permit continued take of the species and then remove the RARE use from the creek once the species went extinct. This

[8] Arguably, even the changes in summer instream flows are not reductions in water quality. As noted above, NOAA Fisheries commented on the Draft EIR that the Project would have beneficial effects on populations of native rainbow trout for reasons that include reducing non-native aquatic predation. The NOAA Fisheries comments were addressed to the overall effect of the modified flow regime, however, including the effects of higher winter flows. Moreover, the changes in water quality during the summer involve both benefits, through reduction in predation by non-native species, and adverse changes, through reductions in the area with flows and temperatures suitable for trout. Because this order concludes that any reductions in water quality are consistent with antidegradation requirements, it is not necessary to determine whether antidegradation requirements apply, or should be considered inapplicable based on the view that the changes in water quality are improvements, not reductions.

would be inconsistent with the basic purposes of the Clean Water Act and the federal Endangered Species Act. (See 33 U.S.C. § 1251(a); 16 U.S.C. § 1531.)[9]

Piru Creek is designated for multiple uses, including habitat for fish (COLD) and habitat for endangered toads (RARE). To the extent the scientific evidence indicates that these uses require conflicting parameters,[10] the State Water Board should adopt certification conditions that protect the species that are more vulnerable to harm from changes in flow or other water quality conditions. Changing flows to protect the arroyo toad may have a detrimental effect on trout, but this must be weighed against the harm that would be caused to the arroyo toad by maintaining flows for trout. Assuming that we must choose between the two species, the proper course is to protect the more sensitive native endangered toad rather than the non-endangered trout. (40 C.F.R. 131.11(a)(1) ["For waters with multiple use designations, the criteria shall support the most sensitive use."].)[11] Protecting the more sensitive use maximizes the benefit to the people of the State. It is a reasonable use of the water – indeed, a contrary pattern of usage would be unreasonable. It will not result in water quality less than prescribed in the Basin Plan.[12] While the certification may not fully protect trout for the entire reach in which they now live, Petitioner does not assert that the fish will not be able to migrate to other locations (including Lake Piru) when conditions in the creek reach are not suitable. For these reasons, the conditions under the certification comply with the antidegradation law. (State Water Board Resolution 68-16; 40 C.F.R § 131.12.)

In approving issuance of the certification, the State Water Board is protecting all beneficial uses, and allowing reductions in the water quality supporting one use only to the extent necessary to improve water quality for another more sensitive use. Consistent with the federal antidegradation policy, the certification protects instream beneficial uses, and any reductions in

[9] In its comment letter on the petition, the FWS stated its intention to uphold its responsibility to protect the arroyo toad under the Endangered Species Act should the State Water Board certify a project that would cause take of the species.

[10] Where protection of both species is possible, both should be protected. While this will not be possible under the regime proposed by Petitioner (*see* section 4.1.1, *supra*), it is possible under the regime proposed by Applicant (*see* section 4.2.1.2, *post*).

[11] According to NMFS, no steelhead are present in Piru Creek. (Letter from NMFS to FERC, Appendix B to the Petition for Reconsideration, p. 5.) Although there is habitat appropriate for steelhead, and evidence that trout in the creek are derived from steelhead populations breeding below the dams or prior to their construction, the creek does not have access seaward to support an anadromous fishery. If conditions were to change such that passage was possible, it might constitute cause to reopen the certification under condition 19 of the certification.

[12] See section 4.1.2, *supra*, for discussion of particular standards.

enhanced water quality for trout provided by flows in excess of natural conditions are necessary to accommodate the preservation of the arroyo toad, an endangered species dependent on the water quality conditions provided for under the certification. Consistent with State Water Board Resolution 68-16, the certification is consistent with the Basin Plan and with the maximum benefit of the people of the state. By contrast, Petitioner's alternative flow regime would not meet state and federal water quality requirements because it would not protect the most sensitive uses. (40 C.F.R. 131.11(a)(1).)

4.2 The State Water Board's Actions Comply with the California Environmental Quality Act (CEQA)

4.2.1 Petitioner's arguments are not new information or changed circumstances requiring the preparation of a subsequent or supplemental EIR

DWR issued a final EIR in February 2005 entitled *Environmental Impact Report for the Simulation of Natural Flows in Middle Piru Creek* (State Clearinghouse No. 2004051123). DWR circulated the draft EIR for public comment, including submission of copies to the State Clearinghouse for distribution to state agencies (including the State Water Board, Division of Water Rights) before applying for water quality certification by the State Water Board.[13] As a responsible agency, the State Water Board relies on the EIR prepared by the lead agency, DWR, but makes its own determination as to whether and with what conditions to approve the

[13] The certification incorrectly stated that the State Water Board was not consulted as a responsible agency. Although DWR did not identify the State Water Board as a responsible agency, the State Water Board was included among the agencies that received copies of DWR's notice of preparation and Draft EIR from the State Clearinghouse. The modifications to the certification made by this order include deletion of the statement that the State Water Board was not consulted.

project, taking into consideration the information provided in the lead agency's EIR. (Pub. Resources Code, §§ 21080.1, subd. (a), 21167.2, see *id.* §§ 21002.1, subd. (d).)[14]

The Guidelines for Implementation of the California Environmental Quality Act (Cal. Code Regs., tit. 15, § 15000 et seq. (CEQA Guidelines)) specify that after an EIR has been certified, a subsequent EIR is not required unless the lead agency first "determines, on the basis of substantial evidence in the light of the whole record" that CEQA Guidelines, section 15162 applies. (See also CEQA Guidelines, § 15052 [a shift in lead agency designation, where a responsible agency considering an approval assumes the role of lead agency, may occur if a subsequent EIR is required under section 15162]; CEQA Guidelines, § 15053 [allowing use of a supplemental EIR where a subsequent EIR would otherwise be required, but only minor additions or changes are needed].)

Petitioner argues that under CEQA Guidelines section 15162, "the State Water Board must prepare a subsequent or supplemental EIR to analyze any changed circumstances and new information that was not available at the time the EIR was certified." Contrary to Petitioner's assertion, a subsequent or supplemental EIR is not required simply because there is a changed circumstance or new information. Section 15162 sets other limitations that substantially restrict the circumstances under which changed circumstances or new information may require the preparation of a subsequent or supplemental EIR.

A subsequent or supplemental EIR is not required for changed circumstances unless those changes are substantial and will require major revisions to the EIR due to the involvement of

[14] Petitioner argues that the State Water Board cannot issue the certification if it determines the EIR prepared by DWR is inadequate. (Petition, p. 11.) To the extent Petitioner is arguing that a subsequent or supplemental EIR may be required simply because a responsible agency determines that the lead agency's EIR was inadequate at the time it was certified, the argument is based on a misreading of the regulation on which Petitioner relies.

Petitioner points to section 15096, subdivision (a), which provides that a responsible agency complies with CEQA "by considering the EIR or negative declaration prepared by the lead agency and by reaching its own conclusions on whether and how to approve the project." This means that the responsible agency decides for itself whether and on what conditions to approve the project, based on the lead agency's environmental document and other information in the record. (See also Cal. Code Regs., tit. 14, § 15096, subd. (h).) It does not mean that the responsible agency second guesses the lead agency's certification of the adequacy of the environmental document, and decides whether or not to approve the project based on the adequacy of the environmental document, instead of making its decision based on the merits of the project or the environmental impacts of the project as identified in the lead agency's environmental document.

Except where substantial changes or new information requires a subsequent or supplemental environmental document under Public Resources Code section 21166, Public Resources Code section 21167.2, the State Water Board, when acting as responsible agency, is required to conclusively presume a lead agency's EIR is adequate once the time to challenge the lead agency's approval has expired.

new significant environmental effects or a substantial increase in the severity of previously identified significant environmental effects. (CEQA Guidelines, § 15162, subd. (a)(2).)

A subsequent or supplemental EIR is not required for new information unless that information is of substantial importance and it was not and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified. (*Id.*, § 15162(a)(3).) In addition, the new information must show:

(1) the project will have one or more significant effects not discussed in the certified EIR;
(2) significant effects previously examined will be substantially more severe than shown in the EIR;
(3) mitigation measures previously found not to be feasible would in fact be feasible; or
(4) mitigation measures or alternatives that are considerably different than those analyzed in the EIR would substantially reduce significant effects on the environment.

(*Ibid.)*

The information provided by Petitioner does not meet these requirements, as discussed in the following sections.

4.2.1.1 Information provided by petitioner

The Petitioner submits the following information, asserting that it fulfills the requirements of section 15162 of the CEQA Guidelines. (Petition, p. 12.)

- A 2006 study conducted for the California Department of Fish and Game (DFG) entitled "Population structure and ancestry of *O. mykiss* populations in South-Central California based on genetic analysis of microsatellite data", authored by Derek Girman and John Carlos Garza, that demonstrates that juvenile trout collected in middle and upper Piru Creek are genetically related to steelhead.

- A report entitled "Middle Piru Creek Arroyo Toad (Bufo californicus) Clutch Surveys 2005", prepared by Nancy Sandburg for the California Department of Water Resources in 2006 (Sandburg Report), that describes the results of arroyo toad monitoring activities conducted in middle Piru Creek during the spring and summer of 2005.

- Recent studies and reports that were submitted as attachments to a December 4, 2008 letter to the Deputy Director for Water Rights prior to issuance of the certification that describe water management and the impact of climate change on water resources in California that includes the following documents:

    - Kiparsky and Gleick (2003) “Climate Change and California Water Resources: A Survey and Summary of the Literature”;
    - California Climate Change Center (2006) “Our Changing Climate”;
    - DWR (2008) “Managing an Uncertain Future”; and
    - State of California (2008) “The State Water Project Delivery Reliability Report”.

- A publication released in November 2008 by California Trout entitled, “SOS: California's Native Fish Crisis", that is based on a peer-reviewed study authored by Dr. Peter Moyle, Dr. Joshua Israel and Sabra Purdy entitled, “Salmon, Steelhead and Trout in California: Status of an Emblematic Fauna.” These reports describe the life history and current status of 32 native salmonid species located throughout California and the many factors that have led to their steep decline. The reports also provide recommendations for management actions to address the decline. Both reports were included in the December 4, 2008 submittal to the Deputy Director for Water Rights.

- A report entitled “Alternate Flow Regime to Protect Rare Native Species in Middle Piru Creek (Los Angeles and Ventura Counties, California)”, prepared by Land Protection Partners (LPP), that describes the alternate flow regime proposed by the Petitioner and presents an analysis of its impact to native species that inhabit middle Piru Creek.

4.2.1.2 The 2006 DFG study showing that trout are related to native steelhead in Piru Creek is not new information requiring a subsequent or supplemental EIR

The 2006 DFG study examines the genetic population structure and ancestry of central and southern California wild trout populations based on samples collected at 20 sites within five coastal drainage basins extending from Monterey Bay south to Ventura County. In the vicinity of the Project reach, fish samples were collected in the Piru Creek drainage at three locations: (1) Lockwood Creek, (2) Piru Creek at Gold Hill (the latter two located above Pyramid Dam), and (3) Frenchman’s Flat, located below Pyramid Dam. Fish samples were also collected downstream of Santa Felicia Dam at two locations on tributaries to the Santa Clara River and from the Fillmore Hatchery, the origin of the trout stocked in Piru Creek. In general, the study found basin-specific lineages that indicated similarity among fish collected both above and below dams in each of the five drainage basins included in the study. The study also found that the trout population in the Santa Clara River (which includes Piru Creek) was the most distinct of the populations in the five basins. The authors suggest this is a consequence of greater

influence of hatchery introgression on these populations, which tended to cluster more closely with the Fillmore Hatchery trout samples.

The Petitioner claims that these results are new information requiring a subsequent or supplemental EIR. The information contained in the 2006 DFG study is not entirely new, however. (See CEQA Guidelines, § 15162, subd. (a)(3) [new information must be of substantial importance].) Comments submitted by NOAA Fisheries on the draft EIR mentioned preliminary results from the DFG study indicating that "native rainbow trout in the middle reaches of Piru Creek are closely related to other trout populations in the Santa Clara River with access to the ocean." Furthermore, the possibility that remnant populations of native steelhead exist in middle Piru Creek was acknowledged as "conceivable" in DWR's Final Environmental Impact Report (FEIR) in response to comments submitted by California Trout. (DWR FEIR, Appendix A, p. 8.) A study confirming the existence of conditions that the EIR already recognizes as possible and does not dismiss as speculative or unlikely does not amount to new information of substantial importance requiring preparation of a subsequent or supplemental EIR. (See CEQA Guidelines, § 15162, subd. (a)(3).)

Finally, NOAA Fisheries stated in a January 11, 2005 comment letter on the draft EIR that "the proposal to change the Pyramid Reservoir operations to more closely simulate the natural variability of stream flows within the middle reaches of Piru Creek, while intended primarily to restore habitat conditions for the federally endangered Arroyo toad (*Bufo californicus*), is generally compatible with and complementary to NOAA Fisheries' on-going efforts to recover historic steelhead populations in the Piru/Santa Clara River drainages." If restoration to natural conditions will be beneficial to recovery of steelhead, the presence of remnant steelhead populations it is not a significant impact warranting a subsequent EIR. (CEQA Guidelines, § 15162, subd. (a)(3)(A)&(B).)

4.2.1.3 Information in the Sandburg Report concerning the arroyo toad and CRLF is not new information warranting a subsequent EIR

The Sandburg Report presents the results of monthly arroyo toad breeding surveys conducted in the spring and summer of 2005 following high flood flows during the previous winter. 2005 was the first year that DWR released winter flows from Pyramid Dam based on a strategy similar to the flow provisions contained in the water quality certification. The report describes how higher-than-normal winter flows flushed silt and encroaching vegetation from the stream

channel, thereby creating more and better habitat for arroyo toad breeding. These higher flows extended later into the spring and summer than is typical due to greater than average rainfall in the vicinity of middle Piru Creek (48.4 inches in 2005 *vs*. 19.6 inches for an average year). The changes in habitat brought on by the high winter flows resulted in exceptional breeding activity, with high numbers of arroyo toad egg clutches (145-165 clutches) observed in the lower portion of the Project reach between Lake Piru and Ruby Canyon (approximately three miles).

Petitioner's claim that the Sandburg Report supports their proposal for enhanced summer flows is not substantiated. First, it is not appropriate to consider only one year of arroyo toad breeding data as justification for the flow regime proposed by the Petitioner, especially when the data cover the first year of a new flow regime that included the higher winter flows that the Sandburg Report credits for enhanced habitat. Second, while it is true that the breeding surveys conducted by Nancy Sandburg in 2005 indicated successful arroyo toad reproduction during a year with consistently high summer flows, a more recent breeding survey also conducted by Nancy Sandburg in 2007 shows successful arroyo toad breeding (106 clutches observed) during a year characterized by low rainfall and resulting low summer flows. The 2007 report goes on to state that prior to natural flow simulation beginning in 2005, arroyo toad habitat conditions were degraded as a result of augmented, sustained summer flows, irregular releases, and decreased winter flows, resulting in total annual clutch counts of 12, 0, and 13 clutches respectively in 2002, 2003, and 2004. Moreover, while the 2007 report concludes that winter high flows appear to be the most important factor in maintaining appropriate habitat conditions for arroyo toad breeding and foraging, the report also concludes that lower summer flows are a necessary complement to retard riparian and aquatic vegetative growth and reduce the presence and reproduction of arroyo toad predators.

With respect to the presence of larvae of the threatened California red-legged frog detected in the project reach in 2005, the threats to red-legged frogs identified by FWS for the habitat unit that encompasses the Project reach include predation by non-native species, e.g. bullfrogs. The simulated natural flow regime described in the water quality certification would lead to the continued reduction of bullfrog populations within middle Piru Creek, thereby enhancing habitat for the California red-legged frog. The EIR concludes that, "if present, no significant impacts to [red-legged frogs] would be expected to occur from implementation of the proposed project." (DWR EIR, p. 3-35.) In light of this statement's inclusion in the EIR, the new information confirming presence of red-legged frogs does not show any significant effect not discussed in

the EIR. Consequently, the information contained in the 2005 Sandburg Report does not justify preparation of additional CEQA documentation. (See CEQA Guidelines, § 15162, subd. (a)(3)(A).)

4.2.1.4 Changes due to global warming do not require a subsequent EIR

Petitioner contends that changes in the amount and timing of rainfall in California have changed the circumstances under which the project will operate.[15] Petitioner does not demonstrate, however, that information of substantial importance concerning climate change was not available at the time DWR's EIR was prepared. Both the existence of climate change and the potential for effects on California water supplies were well known in February 2005, when the final EIR was certified. (See, e.g., Kiparsky & Glieck, *Climate Change and California Water Resources: A Survey and Summary of the Literature* (2003) included in California Trout's December 4, 2008 submittal.)

Petitioner's argument amounts to a complaint that the original DWR EIR did not adequately analyze the impacts of climate change. But the time to challenge perceived deficiencies in the DWR EIR has long since passed, and an attempt to do so now is untimely. (Pub. Resources Code, §§ 21167, 21167.2.) A subsequent or supplemental EIR may be required based on changes in the project, changed circumstances or new information that could not reasonably have been analyzed in the original EIR. (See *id.* § 21166; CEQA Guidelines, § 15162.) Except where the approval under consideration by the State Water Board involves activities outside the scope of the project considered in the lead agency's EIR, a circumstance not present here, the State Water Board as responsible agency cannot require preparation of a subsequent or supplemental EIR to correct alleged deficiencies in the lead agency's EIR that were known or should have been known at the time the lead agency certified the EIR. (Pub. Resources Code, § 21167.2.)

[15]Petitioner does not explain how this general information is relevant to conditions under which this certification will apply. Petitioner refers to changes in California in general, without identifying any information concerning rainfall in the general location of the project. Nor does Petitioner provide any information relevant to how soon these changes in amount and timing of rainfall are likely will occur. The water quality certification being challenged by Petitioner will be in effect for a limited period. The certification is for an amendment to a FERC license. The license itself expires in 2022, after which a new certification will be required for relicensing, although FERC may issue annual licenses if relicensing proceedings are not completed within that period.

4.2.1.5 The 2008 California Trout report by investigators at UC Davis on the status of salmonids in California is not new information warranting a subsequent EIR

The Southern California steelhead distinct population segment was first listed by NOAA Fisheries as endangered under the Endangered Species Act in 1997, a status that NOAA Fisheries reaffirmed in 2006. Most, if not all, of the factors that have led to the widespread decline in native steelhead populations in California that are discussed in the 2008 California Trout report were known at the time the EIR was written. For example, when the initial status review of west coast steelhead was completed in 1996, a supplemental document was released by NOAA Fisheries entitled "Factors for Decline: A Supplement to the Notice of Determination for West Coast Steelhead under the Endangered Species Act." This document provided a thorough review of factors that have led to the decline of steelhead and covered virtually all of the same concerns that are brought up in the 2008 report published by California Trout. While the California Trout report may contain additional specifics regarding the effects of human activity on native steelhead, it does not amount to new information that was not known and could not have been known with reasonable diligence in 2005. (CEQA Guidelines, § 15162, subd. (a)(3).)

4.2.1.6 The Land Protection Partners report about breeding habits and needs of the arroyo toad is not new information warranting a subsequent EIR

The Land Protection Partners report submitted by the Petitioner presents an analysis of the impacts of the flow regime contained in the water quality certification and the alternate flow regime proposed by the Petitioner on the arroyo toad and other sensitive amphibian and reptile species, native fishes, exotic predators and exotic plants. It begins with an assessment of impacts to arroyo toads associated with the release of winter flows based, in part, on a comparison between Piru Creek and the Santa Margarita watershed, located near Camp Pendleton in San Diego County, followed by an assessment of the impact that eliminating augmented summer flows has on sensitive species. The report asserts that the reduction in summer flows will lead to greater depredation of arroyo toads by bullfrogs and will eliminate or decrease arroyo toad recruitment during dry years. The report then discusses the Petitioner's alternate flow regime and describes the rationale for selecting 15 cfs as the summer flow target, which is based on the 75th percentile flow from a 17-year stream gage record for Piru Creek at Bucks Creek above Pyramid Lake. The report claims that scientific literature and observations on Piru Creek show that additional summer water releases benefit sensitive native species. The report then describes the adaptive management and mitigation measures proposed by the

Petitioner, which include sediment replenishment in the upper portion of the reach below Pyramid Dam and selective removal of adult bullfrogs from arroyo toad breeding habitat during the breeding season.

In general, Petitioner's claim that the report contains new and previously unavailable information about arroyo toad breeding habits is unsubstantiated, since the report makes observations regarding the characteristics of suitable arroyo toad breeding habitat that are similar to observations found in previously published reports on the topic. (*See, e.g.,* Sweet, S., Initial Report on the Ecology and Status of the Arroyo Toad (*Bufo microscaphus californicus*) on the Los Padres National Forest of Southern California, with Management Recommendations (1992); USFWS, Arroyo Southwestern Toad (*Bufo microscaphus californicus*) Recovery Plan (1999).) The report's claim that the elimination of augmented summer flows in Piru Creek will decrease or eliminate arroyo toad recruitment during dry years is contradicted by previous field-based research by various authors (including Dr. Samuel Sweet) and by the breeding surveys discussed above that were conducted in middle Piru Creek in spring and summer of 2007, a year for which precipitation was characterized as significantly below average in Southern California.[16] There is nothing provided in the LPP report to support the claim that additional summer water releases as proposed by petitioner would benefit sensitive native species.

Thus, much of the information in the report is not of substantial importance, but is cumulative of other information about arroyo toad habitat that was already available when the EIR was certified. To the extent that the report's claims are new – specifically the claim that elimination of augmented summer flows will decrease arroyo toad recruitment – the new information is unpersuasive in light of other, more thorough scientific reports in the record. Under section 15162 of the CEQA Guidelines, a subsequent or supplemental EIR is not required simply because a new report claims that new or substantially more severe environmental impacts will occur -- there must be new information that "shows" those impacts will occur. (CEQA Guidelines, section 15162, subd. (a)(3).)

[16] DWR Bulletin 120 for May 2007 states that October through April (seasonal) precipitation in the South Coast Region was only 30 percent of normal for the 2006-2007 water year.

4.2.1.7 Imposition of monitoring requirements does not establish that there are unmitigated impacts

Petitioner contends that the State Water Board's inclusion of a monitoring requirement in the certification, requiring DWR to conduct annual breeding surveys of the arroyo toad, amounts to an admission that the project will adversely affect the arroyo toad and a deferral of mitigation for those impacts. There is no legal or factual basis for this argument. The monitoring requirement cited by Petitioner is a water quality monitoring requirement, adopted under the Porter Cologne Water Quality Control Act, not a mitigation monitoring requirement or other condition adopted to meet the requirements of CEQA (Compare Wat. Code, § 13381 with Pub. Resources Code, § 21081.6.)

As part of water quality certification, the State Water Board may require monitoring, studies, or other information "as may be reasonably required." (Wat. Code, § 13383.) There is no requirement that there be a potential for adverse environmental impacts within the meaning of CEQA before the State Water Board may impose these requirements. These requirements may be established for water quality purposes, which include restoring water quality, not just avoiding adverse impacts of a project within the meaning of CEQA. (Compare Wat. Code, §§ 13000 [attain the highest level of water quality which is feasible], 33 U.S.C. § 1251 [restore and maintain the integrity of the nation's waters] with CEQA Guidelines, § 15382, subd. (g) [defining significant effect on the environment as a substantial, or potentially substantial, "adverse change" in the physical environment].) Thus, even in the absence of any potential adverse change from a modified flow regime – or even where, as here, the flow regime will improve conditions for the arroyo toad – the State Water Board may require monitoring, studies, or other information for other reasons. These include obtaining information that may provide the basis for further adjustments in the flow regime if those adjustments would provide greater benefit. Monitoring and reporting may also be imposed to provide background information on water quality conditions, to evaluate the effectiveness of measures established to improve water quality, or for other reasonable purposes. Establishing monitoring conditions or other requirements for providing additional information simply acknowledges that there is a benefit in obtaining additional information, and that under the circumstances it is not unreasonable to require the regulated entity to provide that information. As the certification condition notes, "Monitoring for . . . listed . . . species . . . is included to better understand how implementation of

the Project affects these species and will allow for collection of information about their status in middle Piru Creek."

4.2.2 Because the certification does not include appropriate CEQA findings, the State Water Board will amend the certification to make those findings

The EIR found significant impacts from alteration of drainage patterns resulting in erosion, exposure of people to danger caused by flooding, and reduced angling opportunities. (EIR, p. ES-5 & ES-6.) Petitioner accurately notes that the certification as issued did not include findings on these impacts as required by CEQA Guidelines sections 15091 and 15096, subdivision (h).[17] The certification will be amended to include the following findings.

The EIR identified three significant impacts from the project.

Impact H-3: The proposed project could alter the existing drainage pattern in a manner which would result in erosion and lead to potential damage to existing infrastructure.

To mitigate this impact to a less than significant level, the State Water Board will include Mitigation Measure H-3 from the EIR, as modified to ensure that the measure is enforceable by the State Water Board, as a condition of the certification to avoid erosion damage to infrastructure, as follows:

> DWR shall perform an engineering analysis to determine the potential for expected releases to damage Old Highway 99, the Old Highway 99 bridges, utilities, and other infrastructure in or adjacent to the channel, and shall submit the analysis for approval by the Deputy Director for Water Rights no later than one year from issuance of the FERC license amendment. DWR shall make any revisions to the engineering analysis that are required by the Deputy Director for Water Rights, within the period specified by the Deputy Director for Water Rights. In accordance with section 4.2.3 of this order, concerning the mitigation monitoring program, the engineering analysis shall be used as a basis for establishing procedures and guidelines for monitoring erosion at infrastructure during flood releases. DWR shall monitor erosion at key potential infrastructure damage areas during large flow releases and temporarily curtail releases

[17] It should be noted that while Petitioner properly raises concerns about the lack of findings in the original certification, the alternative flow regime recommended by Petitioner would not serve to avoid or mitigate impacts from erosion or exposure of people to danger caused by flooding. Like the flow regime approved by the certification, Petitioner's alternative flow regime would provide for high flows at times those high flows would occur naturally, to the extent consistent with the operational constraints of Pyramid Dam.

should the monitoring determine the infrastructure to be at risk. If the monitoring program determines that the infrastructure is at risk, DWR shall submit plans for engineered erosion protection for approval by the Deputy Director for Water Rights, and install engineered erosion protection as approved by the Deputy Director for Water Rights.

Impact H-8: The proposed project could expose people or structures to a risk of loss, injury or death involving flooding, including flooding as a result of the failure of a dam.

To mitigate this impact to a less than significant level, the State Water Board will include Mitigation Measure H-8 from the EIR, as modified to ensure that the measure is enforceable by the State Water Board, as a condition of the certification, as follows:

DWR shall work with the USFS and landowners to develop a warning system and signage program to warn the public of dangerously high flows in middle Piru Creek, and shall submit the proposed warning system and signage program for approval by the Deputy Director for Water Rights within one year of the date of this order or within one month after issuance of the FERC license amendment, whichever occurs first. DWR shall make any revisions to the warning system and signage program that are required by the Deputy Director for Water Rights within the period specified by the Deputy Director for Water Rights. DWR shall implement the warning system and signage program as approved by the Deputy Director. In accordance with section 4.2.3 of this order, concerning the mitigation monitoring program, DWR will inspect signage at least annually and repair or replace warning signs as needed.

Impact R-3: The impact to recreational opportunities for anglers identified in the EIR results from the reduction in naturally reproducing trout that is expected to occur.

The EIR identifies Mitigation Measure R-3, which involves stocking some or all of an additional 1000 pounds of trout in Piru Creek in the upper portion of the reach in addition to the 3,000 pounds that DFG typically stocks at Frenchman's Flat, to mitigate this impact to a less than significant level. Implementation of this measure is within the responsibility and jurisdiction of DFG and potentially other public agencies, and not the State Water Board.

DFG's fish stocking program has been challenged in litigation based on claims of harm to native trout and amphibians, and a court order requires DFG to complete an EIR on its stocking program. The court asked DFG to negotiate with the plaintiffs in the litigation to seek an agreement as to where fish stocking may continue pending completion of the EIR, which DFG anticipates will be completed in 2010. DFG and the plaintiffs reached an agreement setting criteria for where fish stocking may continue. Based on those criteria, DFG prepared a list of streams where fish stocking would continue and where it would be discontinued. Piru Creek is listed as a stream where fish will not be stocked, meaning that the fish stocking at Frenchman's Flat will be discontinued until after the program is reevaluated based on the EIR. In view of the environmental and legal concerns with respect to fish planting in stream reaches with native amphibian populations and DFG's decision to stop fish planting on Piru Creek, the State Water Board finds that expanding fish planting on Piru Creek as mitigation for the modification of instream flow requirements approved by this certification is infeasible.[18]

The additional fish stocking proposed in Mitigation Measure R-3 would occur upstream of a physical barrier that typically prevents fish stocked at Frenchman's Flat from moving upstream. Fish caught upstream of this barrier were believed to be from a naturally reproducing population, and the reach is currently managed as a catch-and-release area.[19] While the EIR concludes that Mitigation Measure R-3 would mitigate impacts on recreational angling opportunities to less than significant levels, implementation of Mitigation Measure R-3 would be inconsistent with the option of managing the upper portion of the reach as a fishery based on a naturally reproducing population.

The EIR also includes another option, labeled Alternative 2: Reversion to FERC License 2426 Article 52 Flow Requirements, which would avoid adverse impacts on recreational opportunities for anglers. Alternative 2 would return to the flow release schedule used prior to the temporary waiver from FERC. This alternative is not feasible due to impacts to the endangered arroyo

[18] This finding is based on the information currently available to the State Water Board and the need to complete the water quality certification process within a reasonable period. After completing the EIR on its fish stocking program and evaluating the effects of fish stocking on Piru Creek, DFG may reinstate fish stocking at Frenchman's Flat or expand fish stocking to include the upper portion of the reach if DFG determines that the action is consistent with protection of endangered species and is otherwise appropriate.

[19] The Draft EIR states that DFG fishery biologists had recently determined that trout located above the barrier were of the same genetic stock as trout released at Frenchman's Flat. However, in light of more recent evidence contained in the 2006 DFG study showing that trout collected in Piru Creek at Frenchman's Flat are genetically similar to trout collected at other locations in the Santa Clara River basin, the mitigation measure proposed in the EIR to plant trout above the passage barrier may no longer be appropriate.

toad. Alternative 2 would not achieve the primary purpose of the proposed project, which is to revise the stream release schedule from Pyramid Dam to avoid the incidental take of the endangered arroyo toad due to water releases into middle Piru Creek. In addition, Alternative 2 is infeasible because it does not meet state and federal water quality requirements. By failing to establish a flow regime protective of the arroyo toad, Alternative 2 would not protect the most sensitive uses. (40 C.F.R. 131.11(a)(1).)

Petitioner's alternative flow regime could serve to mitigate lost recreational opportunities for anglers, but is infeasible for the same reasons that Alternative 2 is infeasible. Higher flows that might provide better angling opportunities would adversely affect the endangered arroyo toad, which would violate water quality requirements and be inconsistent with the policies of the federal Endangered Species Act.

Petitioner's alternative flow regime poses an additional problem. Because it would maintain high winter flows consistent with natural inflows to Pyramid Lake, while requiring higher than natural releases from Pyramid Lake at other times of the year, Petitioner's alternative flow regime would require releases from Pyramid Lake in excess of the total natural inflow. The water for these additional deliveries would necessarily come from water discharged into Pyramid Lake from the California Aqueduct, meaning that the additional flows required by Petitioner's alternative flow regime would come at the expense of higher diversions from the Delta or reduced water deliveries in the State Water Project service area. As discussed above, restoration of natural conditions will be beneficial to steelhead recovery. If the artificially high flows between March 15 and August 31 called for by Petitioner's alternative flow regime were provided by increased Delta diversions, the potential for adverse impacts on species in the Delta would greatly outweigh benefits to recreational angling in Piru Creek. (See, generally, Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (2006) at p. 5.) If these flows were made available through reduced State Water Project deliveries, the benefits to the recreational trout fishery would be outweighed by the adverse social and economic impacts of reduced deliveries.[20]

[20] See, for example, Howitt, R.E, MacEwan, D and Medellín-Azuara, J. (2009) Economic impacts of reductions in Delta exports on Central Valley agriculture. Giannini Foundation of Agricultural Economics Agricultural and Resource Economics Update, Vol. 12, No. 3.

4.2.3. Mitigation Monitoring or Reporting Requirements

Section 15097 of the CEQA Guidelines requires that when a public agency makes a finding that it has adopted mitigation measures to avoid or reduce the adverse impacts of a project, the public agency shall adopt a mitigation monitoring or reporting requirement.

In section 4.2.2 above, the State Water Board adopts mitigation measures for Impact H-3 and Impact H-8. The monitoring or reporting requirements for these impacts are as follows:

Monitoring or reporting requirement for impact H-3:

DWR shall complete an engineering analysis for infrastructure adjacent to Piru Creek and make any revisions required by the Deputy Director for Water Rights, as required in section 4.2.2 above. DWR shall develop procedures and guidelines to monitor erosion based on the engineering analysis within the specified timeframes of the analysis as approved by the Deputy Director for Water Rights, and submit those procedures and guidelines to the Deputy Director for approval. DWR will implement those procedures and guidelines as approved by the Deputy Director for Water Rights, including monitoring erosion at key areas during large flow releases, and installing and maintaining engineered erosion protection as needed in at risk areas. Engineered erosion protection will be monitored following large storm events, defined as storm events that generate flows of 1,000 cfs or more in upper Piru Creek, to determine whether erosion damage has occurred. If damage has occurred, DWR will notify the Forest Service and FWS.

DWR shall prepare and submit to the Deputy Director for Water Rights annual reports that include the results of the monitoring and document the installation of any engineered erosion protection as approved by the Deputy Director. Annual reports shall be submitted by October 1 of each year after the procedures and guidelines to monitor erosion are approved by the Deputy Director for Water Rights.

Monitoring or reporting requirement for impact H-8:

DWR shall develop a warning system and signage program to warn the public of dangerously high flows in middle Piru Creek and shall implement the system and program as approved by the Deputy Director for Water Rights, as provided in section 4.2.2 above. DWR shall inspect the signage at least annually and repair or replace warning signs as needed.

DWR shall prepare and submit to the Deputy Director for Water Rights annual reports that document the implementation of the warning system and signage program, including the results of inspections and the repair or replacement of warning signs. Annual reports shall be submitted by October 1 of each year after the warning system and signage program are approved by the Deputy Director for Water Rights. DWR shall provide a copy of the report to the Forest Service.

4.2.4. Statement of Overriding Considerations

As discussed in Section 4.2.1 above, the EIR found that all of the adverse impacts of the project could be mitigated to a less than significant level. The State Water Board has adopted the mitigation necessary to mitigate impacts H-3 and H-8. With respect to impact R-3, however, the State Water Board found that that specific legal and environmental concerns make it infeasible to adopt the mitigation measure or alternative identified in the final EIR that would avoid or mitigate this impact. Because the State Water Board concludes that the project should proceed even though this impact will not be mitigated, the State Water Board makes this finding of overriding considerations:

The revised stream release schedule provided by the project is reasonably necessary to avoid the incidental take of the endangered arroyo toad. In addition to substantially improving habitat for the arroyo toad, the more natural water flow schedule provided by the project is consistent with state and federal water quality requirements and is compatible with NOAA Fisheries' ongoing efforts to recover historic steelhead populations in the Piru Creek/Santa Clara River drainages. The fish and wildlife and water quality benefits of the project outweigh the adverse impacts on recreational angling opportunities.

5.0 STAY

At the same time that Petitioner requested reconsideration, it also requested a stay of the certification during the pendency of the petition for reconsideration. As the reconsideration process is complete, the issue of whether to issue a stay is moot.

6.0 CONCLUSION

For the reasons discussed above, the petition for reconsideration is granted in part. The certification will be amended to incorporate the necessary CEQA findings, along with the conditions of approval and mitigation monitoring and reporting requirements necessary to effectuate those findings. As amended by this order, the certification is appropriate and proper.

ORDER

IT IS HEREBY ORDERED that the certification of the amendment to FERC License No. 2426 for purposes of compliance with section 401 of the Clean Water Act is amended and attached to this order.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on August 4, 2009.

AYE:	Chairman Charles R. Hoppin Vice Chair Frances Spivy-Weber Board Member Arthur G. Baggett, Jr. Board Member Tam M. Doduc
NAY:	None
ABSENT:	None
ABSTAIN:	None

Jeanine Townsend
Clerk to the Board

Attachment

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification for the

RE-OPERATION OF PYRAMID DAM FOR

THE CALIFORNIA AQUEDUCT HYDROELECTRIC PROJECT

FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2426

SOURCE: Piru Creek

COUNTY: Los Angeles and Ventura Counties

Introduction

The California Department of Water Resources (DWR) and the City of Los Angeles (collectively Licensee) applied to the Federal Energy Regulatory Commission (FERC) on March 17, 2005 for an amendment to the current FERC license for the reoperation of Pyramid Dam (Project), a part of the California Aqueduct Hydroelectric Project, FERC Project No. 2426. FERC Project No. 2426 includes a number of hydroelectric developments that are situated along the length of the California Aqueduct. The application for the license amendment only addresses operation of Pyramid Dam and associated impacts to the 18 mile reach of Piru Creek between Pyramid Dam and Lake Piru. Lake Piru is a non-Project facility operated by United Water Conservation District. A map of the Project vicinity is shown in Attachment A. DWR utilizes Piru Creek for conveyance of State Water Project (SWP) water to its long term contractors. Between 1996 and 2002, total annual outflow at Pyramid Lake ranged between approximately 10,000 – 70,000 acre-feet of water.

Amendments to the FERC license requested in Licensee's application include the modification of minimum flow requirements for Piru Creek below Pyramid Dam required under Article 52 and Exhibit S of the current FERC license, which require Licensee to establish and maintain a year-round trout fishery. DWR requested the license amendment to avoid incidental take of the arroyo toad (*Bufo californicus*), a species listed by the United States Fish and Wildlife Service (FWS) as endangered under the Endangered Species Act. Prior to submittal of the application for a license amendment, Licensee submitted a request to FERC for a temporary waiver from the minimum flow releases under FERC license Article 52 on February 10, 2005. FERC approved the temporary waiver on April 12, 2005. Consequently, DWR has already begun operating Pyramid Dam flow releases to simulate natural flow conditions using the same operating guidelines that will be implemented under the requested license amendment.

The DWR water right at Pyramid Dam and Lake Piru is authorized under Water Right Permit 18709 (Application 25988) issued by the State Water Resources Control Board (State Water Board) and documentation is recorded with the Division of Water Rights (Division). Water Right Permit 18709 is for year round storage of 55,000 acre-feet of water collected from Piru Creek. The beneficial uses of water identified in Permit 18709 are irrigation; domestic; municipal; industrial; water quality; recreational; fish and wildlife preservation and enhancement; and incidental power generation. Lake Piru is also designated as a point of rediversion under various permits and licenses held by DWR that authorize water to be conveyed through the California Aqueduct for distribution at various facilities.

Before FERC can issue a license amendment for the Project, Licensee must obtain water quality certification under section 401 of the Clean Water Act from the State Water Board. (33 U.S.C. § 1341.) The State Water Board must certify that the Project will comply with the applicable provisions of the Clean Water Act, including water quality standards set forth in the Water Quality Control Plan for the California Regional Water Quality Control Board, Los Angeles Region (Basin Plan). The State Water Board must analyze the overall effect of the Project license amendment on water quality and include conditions in the certification, if necessary, to adequately protect the designated beneficial uses identified in the Basin Plan.

Water Quality Certification Conditions

Operational Guidelines to Simulate Natural Hydrology

Article 52 of the current FERC license dictates a continuous minimum stream flow release below Pyramid Dam of 5 cubic feet per second (cfs) from November 16 through April 30, and 10 cfs from May 1 through November 15. This article also includes a requirement for release of additional flow up to 25 cfs from Pyramid Dam into Piru Creek, depending upon the predicted maximum air temperature in the Project area. Additional requirements related to the maintenance of stream flow for the purpose of maintaining a year-round trout fishery are contained in Exhibit S of the current license.

In 2003, FWS expressed concern about higher than natural perennial stream flows in Piru Creek and their impacts to the endangered arroyo toad population that is known to inhabit middle Piru Creek, which is the reach between Lake Piru and Pyramid Dam. These concerns included the effects of increased summer stream flows on non-native species that prey on the toads, such as bullfrogs and crayfish. Additionally, the natural scouring events that are necessary to maintain arroyo toad habitat and that would normally occur during winter storm events are prevented due to the flow management practices under the current license conditions. In communicating their concerns about impacts to arroyo toads, the FWS provided recommendations for managing water releases in Piru Creek that are compatible with survival and recovery of the arroyo toad. These recommendations have been incorporated into the operational scheme proposed by DWR in its license amendment application to FERC.

DWR will operate Pyramid Dam to reflect natural flow conditions by releasing flows from Pyramid Lake to middle Piru Creek at a rate up to approximately 18,000 cfs, which is the maximum volume of water that can be safely released from Pyramid Dam. Inflow to Pyramid Lake will be measured at existing gauging stations that are located above Pyramid Lake on upper Piru Creek and Cañada de los Alamos. A multiplier will be used to account for portions of the Pyramid Lake watershed that are not tributary to either upper Piru Creek or Cañada de los Alamos. Due to operational constraints, the stream release into middle Piru Creek at Pyramid Dam will typically lag measured inflow by approximately one day. Implementation of the proposed project will result in greater volumes of water passing through middle Piru Creek during the rainy season (typically November through April). During the dry season (May through October), flows in middle Piru Creek will gradually diminish in response to decreasing surface water inflow to Pyramid Lake. On rare occasions during dry years, inflow to Pyramid Lake may be reduced to zero.

Radial Gate Testing

Sudden increases or decreases in stream flows can be disruptive to aquatic organisms, especially when they occur during critical life history stages. For this reason, short-term increases in flow to middle Piru Creek associated with testing of the radial gates, stream release valves, or other requirements to test equipment at Pyramid Dam are prohibited between March 15 and June 15 and will be avoided to the extent possible between June 16 and July 31. Scheduled tests that require releases that last longer than 15 minutes will require prior notification to the FWS. This allows the radial gates at Pyramid Dam to be exercised, and provides for testing equipment, as mandated by FERC or other agencies, that would otherwise increase flows by up to 50 cfs for short periods of time.

Monitoring Requirements

Monitoring for federally listed threatened and endangered species and for California species of special concern within the Project area is included to better understand how implementation of the Project affects these species and will allow for collection of information about their status in middle Piru Creek. DWR will develop a monitoring plan that includes annual breeding surveys for federally listed arroyo toads and that may also include surveys for California red-legged frogs, and for two California species of special concern: Southwestern pond turtles and Two-striped garter snakes. The monitoring plan may also need to include surveys for exotic species known to occur in middle Piru Creek, such as bullfrogs and crayfish, which are known to prey upon arroyo toads.

WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

BY THE EXECUTIVE DIRECTOR:

1. The federal Clean Water Act (33 U.S.C. §§ 1251 *et seq.*) was enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (33 U.S.C. § 1251(a).) Section 401 of the Clean Water Act (33 U.S.C. §1341) requires every applicant for a federal license or permit which may result in a discharge into navigable waters to provide the licensing or permitting federal agency with certification that the project will be in compliance with specified provisions of the Clean Water Act, including water quality standards and implementation plans promulgated pursuant to section 303 of the Clean Water Act (33 U.S.C. § 1313). Section 401 of the Clean Water Act directs the agency responsible for certification to prescribe effluent limitations and other limitations necessary to ensure compliance with the Clean Water Act and with any other appropriate requirement of state law. Section 401 further provides that state certification conditions shall become conditions of any federal license or permit for the project.

2. The State Water Board is the State agency responsible for certification in California. (Wat. Code, § 13160.) The State Water Board has delegated this function to the Executive Director by regulation. (Cal. Code Regs., tit. 23, § 3838, subd. (a).)

3. The California Regional Water Quality Control Boards have adopted, and the State Water Board and the US Environmental Protection Agency have approved, water quality control plans (Basin Plans) for each watershed basin in the State. The Basin Plans designate the beneficial uses of waters within each watershed basin and water quality objectives designed to protect those uses. Section 303 of the Clean Water Act requires the states to develop and adopt water quality standards. (33 U.S.C. § 1313.) The beneficial uses together with the water quality objectives that are contained in the basin plans constitute state water quality standards under section 303. The State Water Board has also considered the existing water quality conditions and Project related controllable factors.

4. The Los Angeles Regional Water Quality Control Board (Los Angeles Board), has adopted the Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, which identifies industrial service and process supply; agricultural supply; groundwater recharge; freshwater replenishment; water contact recreation; non-contact recreation; warm freshwater habitat; cold freshwater habitat; wildlife habitat; rare, threatened or endangered species habitat; spawning, reproduction, and/or early development habitat; and wetland habitat as existing beneficial uses for Piru Creek between Pyramid Lake and Lake Piru. Additionally, municipal and domestic supply is identified as a potential beneficial use.

5. On June 12, 2008, FERC issued the final environmental assessment (Final EA) for the Project, pursuant to the requirements of the National Environmental Policy Act. The Final EA presents an evaluation of the Project, addresses potential environmental impacts, and includes responses to comments received on the draft

environmental assessment. The Final EA also includes a Finding of No Significant Impact (FONSI).

6. DWR is the lead agency for the Project for purposes of the California Environmental Quality Act (CEQA). (Pub. Resources Code, §§ 21000 *et seq*.) DWR released a Notice of Preparation of a draft environmental impact report (EIR) on May 19, 2004 and held a public scoping meeting on June 17, 2004 in Santa Clarita. DWR subsequently released a draft EIR entitled *The Simulation of Natural Flows in Middle Piru Creek* in November 2004 (State Clearinghouse No. 2004051123) and held a public comment meeting in December 2004. A Final EIR was released in January 2005. The Final EIR was certified by the Director of DWR and a Notice of Determination was filed with the State Office of Planning and Research on February 15, 2005. DWR incorporated conditions into the Project designed to protect the environment.

7. The State Water Board, as a responsible agency under CEQA, has reviewed and considered the documents produced by DWR to support the environmental review required for the issuance of the Section 401 Water Quality Certification. The State Water Board will file a Notice of Determination within five days from the issuance of this amended certification.

8. DWR found three significant impacts that were disclosed in the EIR. These are designated as Impact H-3: alteration of drainage patterns resulting in erosion; Impact H-8: exposure of people to danger caused by flooding; and Impact R-3: reduced angling opportunities. (Final EIR, p. ES-5 & ES-6.) Mitigation measures that will reduce the severity of impacts to less than significant are included as conditions of this certification for Impacts H-3 and H-8. With respect to impact R-3, the State Water Board order approving this amended certification makes findings that alternatives and mitigation measures that would avoid or mitigate this impact are infeasible, and makes a finding of overriding considerations.

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER BOARD CERTIFIES THAT THE OPERATION OF THE CALIFORNIA AQUEDUCT HYDROELECTRIC PROJECT BY THE CALIFORNIA DEPARTMENT OF WATER RESOURCES AND THE CITY OF LOS ANGELES UNDER AN AMENDED LICENSE ISSUED BY FERC will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law, provided that the California Department of Water Resources complies with the following terms and conditions:

1. Pyramid Dam Stream Flow Conditions

   Stream releases from Pyramid Dam into Piru Creek shall match natural inflow into Pyramid Lake to the extent operationally feasible and consistent with safety requirements, as described in the following guidelines:

   A. Natural inflow to Pyramid Lake will be released into middle Piru Creek at a rate up to approximately 18,000 cfs, which is the maximum safe designed release from Pyramid Dam.

   B. Storm releases into middle Piru Creek may be held back at less than the maximum safe designed release of 18,000 cfs if higher releases are deemed a threat to life, safety, or property at Pyramid Dam or downstream of the dam.

   C. DWR may elect to appropriate inflow to Pyramid Lake above the safe release flows under the provisions of its existing water rights.

   D. Up to 3,150 acre feet of State Water Project water may be delivered to United Water Conservation District via middle Piru Creek between November 1 and the end of February of each water year. During this period, water deliveries may be made over a period of a few days, ramping flows up and down to simulate the hydrograph of a typical storm event, or they may be released more gradually over a longer period.

   E. Radial Gate Testing

      Releases into middle Piru Creek may be increased for short periods of time to exercise the Pyramid Dam radial gate and stream release valves, to test emergency power sources, to conduct tests mandated by FERC, or to meet short-term operational or maintenance requirements. No such testing will be scheduled between March 15 and June 15. Testing will also be avoided to the extent possible between June 16 and July 31. When testing is conducted, flows shall not increase by more than 50 cfs above current base flows and release events shall not last longer than 15 minutes. Scheduled tests that require larger releases or last longer than 15 minutes require prior notification to the FWS. Unscheduled releases due to equipment failure or emergency situations must be reported to the FWS no later than three business days after the event.

F. All flow requirements of this certification are subject to temporary modification if required by equipment malfunction, emergency conditions or law enforcement activity, or critical electric system emergency beyond the control of the Licensee. The Licensee shall provide advance notification to the FWS prior to any temporary modification, when possible. If advance notification is not possible because an event is unforeseeable, Licensee shall notify the FWS no later than 48 hours from the time that any temporary modification has occurred.

2. Arroyo Toad and Sensitive Species Monitoring Condition

Within one year of issuance of the license amendment, DWR shall file with FERC a plan approved by the Deputy Director for Water Rights for annual breeding surveys of the arroyo toad in middle Piru Creek. Monitoring shall occur, at a minimum, in the lower portion of middle Piru Creek between Lake Piru and Ruby Canyon (a distance of approximately 2 to 3 miles) and shall be conducted by a qualified biologist with experience in identifying arroyo toad larvae and tadpoles. An annual monitoring report shall be submitted to the Deputy Director by October 1 of each year that includes the results of the breeding surveys as well as flow data to document daily releases at Pyramid Dam. If three years of monitoring indicate that the arroyo toad population has shown improvement under the flow modifications identified in this certification, DWR, upon consultation with the State Water Board and FWS, may modify the monitoring frequency required to demonstrate the presence of arroyo toads.

3. Mitigation for the potential increased erosion and damage to existing infrastructure.

DWR shall perform an engineering analysis to determine the potential for expected flow releases to damage Old Highway 99, the Old Highway 99 bridges, utilities, and other infrastructure in or adjacent to the channel, and submit the analysis for approval by the Deputy Director for Water Rights no later than one year from issuance of the FERC license amendment.

- DWR shall make any revisions to the engineering analysis that are required by the Deputy Director for Water Rights, within the period specified by the Deputy Director for Water Rights.
- DWR shall develop procedures and guidelines to monitor erosion based on the engineering analysis within the specified timeframes of the analysis as approved by the Deputy Director for Water Rights, and submit those procedures and guidelines to the Deputy Director for Water Rights for approval.
- DWR shall implement those procedures and guidelines as approved by the Deputy Director for Water Rights, including monitoring erosion at key areas during large flow releases.
- If the monitoring program determines that the infrastructure is at risk, DWR shall temporarily curtail releases, and submit plans for engineered erosion protection for approval by the Deputy Director for Water Rights.

- DWR shall monitor engineered erosion protection following large storm events, defined as storm events that generate flows of 1,000 cfs or more in upper Piru Creek, to determine whether erosion damage has occurred. If damage has occurred, DWR will notify the Forest Service and the FWS.
- DWR shall prepare and submit to the Deputy Director for Water Rights annual reports that includes the results of monitoring under this condition and documents the installation of any engineered erosion protection as approved by the Deputy Director for Water Rights. Annual reports shall be submitted by October 1 of each year after the procedures and guidelines to monitor erosion are approved by the Deputy Director for Water Rights.

4. Mitigation for the potential to expose people or structures to a risk of loss, injury or death due to flooding, including flooding as a result of the failure of a dam.

   DWR shall work with the USFS and landowners to develop a warning system and signage program to warn the public of dangerously high flows in middle Piru Creek.

   - DWR shall submit the proposed warning system and signage program for approval by the Deputy Director for Water Rights within one year of the date of this order or within one month after issuance of the FERC license amendment, whichever occurs first.
   - DWR shall make any revisions to the warning system and signage program that are required by the Deputy Director for Water Rights, within the period specified by the Deputy Director for Water Rights.
   - DWR shall implement the warning system and signage program as approved by the Deputy Director for Water Rights.
   - DWR shall inspect the signage at least annually and repair or replace warning signs as needed.
   - DWR shall prepare and submit to the Deputy Director for Water Rights annual reports that documents the implementation of the warning system and signage program, including the results of inspections and the repair or replacement of warning signs. Annual reports shall be submitted by October 1 of each year after the warning system and signage program are approved by the Deputy Director for Water Rights, with copies provided to the Forest Service.

5. This certification is contingent on compliance with all applicable requirements of the Los Angeles Board Basin Plan, except as may be modified by the specific conditions in this certification.

6. Notwithstanding any more specific conditions in this certification, the Project shall be operated in a manner consistent with all water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control

7. Licensee must submit any change to the California Aqueduct Hydroelectric Project that affects the operation of Pyramid Dam that would have a significant or material effect on the findings, conclusions, or conditions of this certification to the Deputy Director for prior review and written approval.

8. DWR shall provide State Water Board staff access to Project sites to document compliance with this certification.

9. The authorization to operate the Project pursuant to this certification is conditioned upon payment of all applicable fees for review and processing of the application for water quality certification and administering the State's water quality certification program, including but not limited to: timely payment of any annual fees or similar charges that may be imposed by future statutes or regulations for the State's reasonable costs of a program to monitor and oversee compliance with conditions of water quality certification.

10. This certification is not intended and shall not be construed to apply to issuance of any FERC license or FERC license amendment other than the FERC license amendment specifically identified in the Licensee's application for certification.

11. This certification does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & G. Code §§ 2050 *et seq.*) or the federal Endangered Species Act (16 U.S.C. §§ 1531 *et seq.*). If a take will result from any act authorized under this certification or water rights held by the Licensee, the Licensee shall obtain authorization for the take prior to any construction or operation of the Project. The Licensee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the Project authorized under this certification.

12. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions provided for under applicable state or federal law. For the purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification.

13. In response to a suspected violation of any condition of this certification, the State Water Board may require the holder of any federal permit or license subject to this certification to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provided that the burden, including costs,

14. In response to any violation of the conditions of this certification, the State Water Board may add to or modify the conditions of this certification as appropriate to ensure compliance.

15. DWR must submit any change to the Project operation that would have a significant or material effect on the findings, conclusions, or conditions of this certification, to the Deputy Director for prior and written approval.

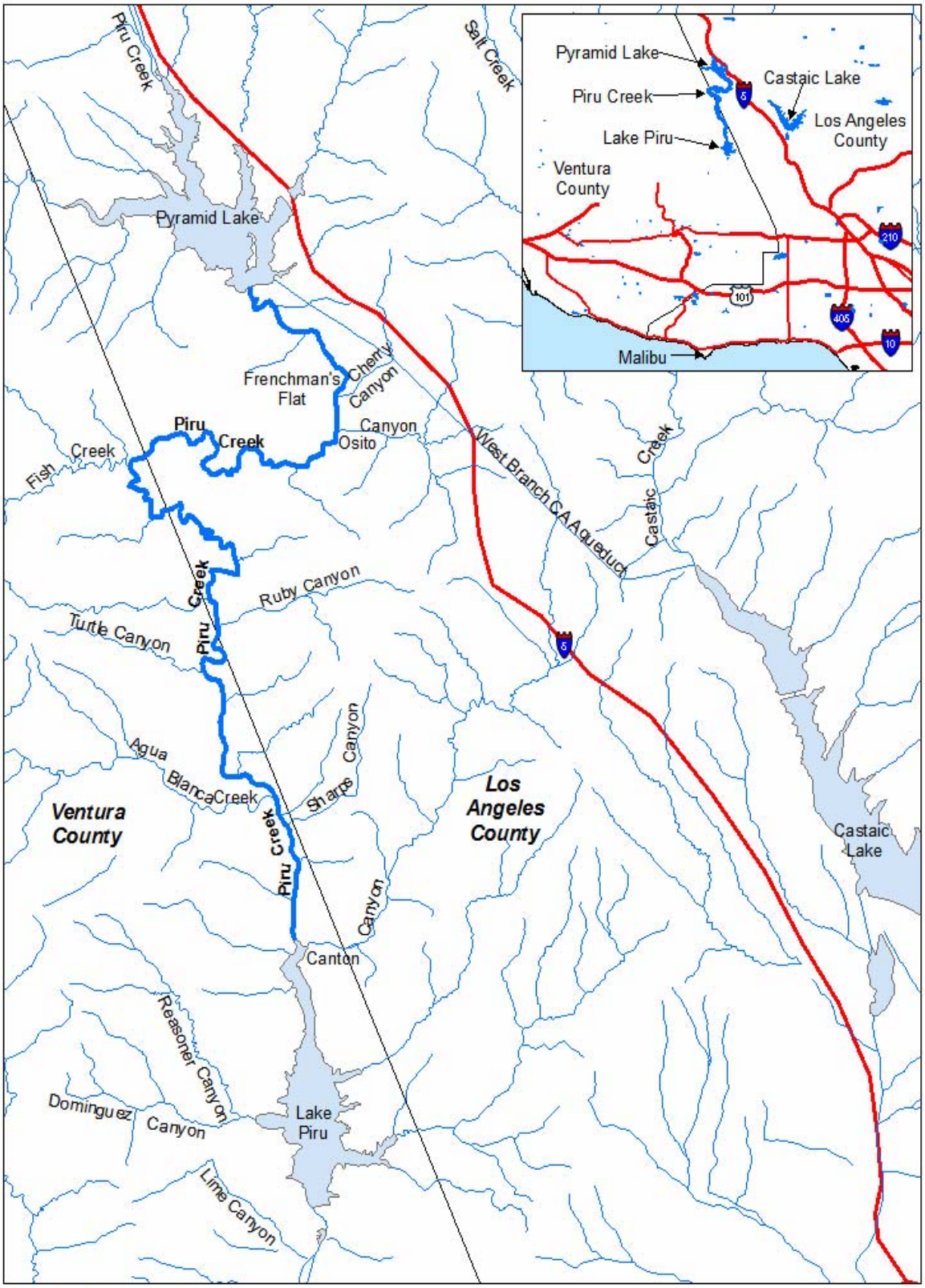
16. This certification is subject to modification upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330 and California Code of Regulations, title 23, division 3, chapter 28, article 6 (commencing with § 3867).

17. The State Water Board reserves authority to modify this certification if monitoring results indicate that continued operation of the Project will violate water quality objectives or impair the beneficial uses of Piru Creek.

18. The State Water Board may add to or modify the conditions of this certification, as appropriate, to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.

19. The State Water Board may add to or modify the conditions of this certification as appropriate to coordinate the operations of this Project and other hydrologically connected water development projects, where coordination of operations is reasonably necessary to achieve water quality standards or protect beneficial uses of water.

20. The State Water Board shall provide notice and an opportunity for hearing in exercising its authority under conditions 17, 18, and 19 above.



Attachment A